

>>>>eliminated at all along Poplar and Dalmeny. I'll also be emailing
>>>
>>>Rich
>>>
>>>
>>>
>>>>Mazzini who said he'd follow up on 7/16 and hasn't.
>>>>
>>>>If you're planning to be in the area to observe, I'd be happy to
>>>>meet with you and show you my mobile station. It's not all that
>>>>impressive. I'll be back from vacation on 8/20.
>>>>
>>>>Thanks.
>>>>/a
>>>
>>>
>

Alan Stillwell

From: James Burtle
Sent: Wednesday, March 17, 2004 7:44 AM
To: Alan Stillwell; Anh Wride; Bruce Franca; Bruce Romano; George Dillon
Subject: FW: Resolution of BPL Interference Complaint from Mr. Vincent

-----Original Message-----

From: Richenbacher, Alan G [mailto:agrichenbacher@pplweb.com]
Sent: Tuesday, March 16, 2004 4:31 PM
To: James Burtle
Subject: Re: Resolution of BPL Interference Complaint from Mr. Vincent Horvath

Mr. Burtle,

Upon learning from you of an RF interference complaint relating to PPL Telcom's BPL equipment on 2/17/2004 initiated by Mr. Vincent Horvath, an amateur radio operator located in Bethlehem, PA, PPL Telcom along with our technology provider, Amperion, took immediate steps to contact Mr. Horvath and begin a process to resolve his complaint. The frequencies used by PPL Telcom's BPL equipment in Mr. Horvath's vicinity were checked and those found to overlap with the amateur radio bands were subsequently adjusted to avoid all amateur radio frequencies. Particular attention was paid to the 10, 12 and 17 meter bands in which Mr. Horvath had reported interference. Mr. Horvath and I were in periodic email contact during the period of time in which these frequency adjustments were being performed.

In a March 1, 2004, email to Mr. Horvath I reported PPL Telcom's frequency adjustments had been completed and explained that I expected that this action should eliminate any interference caused by our BPL equipment. I have not heard from Mr. Horvath since that date and, therefore, consider this matter to be resolved.

Alan Richenbacher
PPL Telcom, LLC
ETN: 220-3779 or Outside: 610-774-3779
Mobile: 610-703-1395
Mobile Text: 6107031395@mobile.att.net

The information contained in this message is intended only for the personal and confidential use of the recipient.

3/17/2004

✓ Penn Yan BPL Radio Interference Report

✓ Richard A. Ayers

KB2DMK

✓ 4/21/2004

Preface

I was approached by the Village of Penn Yan to assist them with reviewing the BPL test site in the Village for potential radio interference. I offered my services to work with the Village and the BPL Company to evaluate the BPL system and avoid any problems.

✓ Company conducting the test:

✓ DVI Data Ventures Inc.

Mark Burling

10697 Del Parado Dr. E.

Largo, FL 33774

BPL Equipment used:

Amperion

Two Tech Dr

Andover, MA 01810

Test Site: Liberty Street/Rt 14A, Court Street, Burns Terrace to Elm Street.

Pre Deployment Test 12/3/03:

A spectrum scan was completed at 3 test sites within the proposed deployment area to document any pre existing radio interference in the area. The Radio equipment used was a Tektronix spectrum analyzer, Icom 735 receiver with a super Antenna mounted on a Chevy Pickup.

Results:

Elm/Burns site – Electrical noise, Noise peaks at 10.5 MHz, Background noise levels were generally below S1 on the receivers signal strength indicator. A single instance of electrical noise at S9 was observed.

Burns/Court site – No documented interference, Noise floor generally below S1

Yates County Building - No documented interference, Noise floor generally below S2

Post Deployment Test (12/27/03 & 4/15/04):

The initial deployment of the BPL system had many problems that caused the system not to function properly. This lead to a delay in completing final testing of the system. Five test sites were sampled and compiled to form this report. The test results are from sample points 30 meters from the power lines. The radio equipment used was a Tektronix spectrum analyzer, Icom 735 receiver with a ham stick antenna mounted on a Chevy Pickup.

The interference assessment for the Penn Yan BPL trial is as follows;

Harmful interference was detected at all five sample sites in the BPL trial area. Harmful radio interference is defined as radio interference that would severely degrade or completely eliminate an incoming radio signal. The BPL interference started at 16.493 MHz and was observed through 38.000 MHz. This area of the radio spectrum includes the 10, 12, 15 and 17 meter Amateur Radio bands and the 11 meter CB band.

The BPL system is compromising any radio communications in this area. I have concentrated all testing efforts at 30 meters from the lines so I have not determined what the zone of interference is. This should be completed and mapped to document a potentially larger scale problem.

If a FCC licensed amateur radio operator lived within or at close proximity to the BPL system, radio communication on the effected bands would no longer be possible. This would render normal or emergency communications useless in the BPL area.

The BPL trial is also causing harmful radio interference to the 11 meter CB band. Not only is general 11 meter communication disrupted but Liberty Street is State Route 14A which is a major truck route through Penn Yan, thus a major concern for CB traffic in the Village.

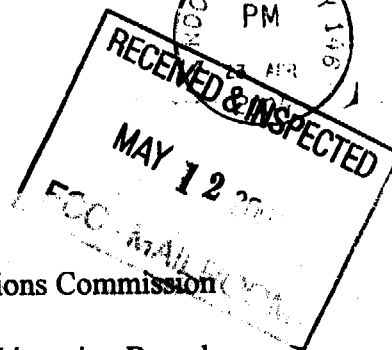
An additional concern to the amateur radio community is the potential problems that amateur radio transmission may cause to the BPL system. This system when deployed had many issues with electrical noise. The BPL system has not been tested properly for these problems. Amateur radio operators are licensed for primary use of the ham frequency allocations. BPL is not; however the community would not understand this if internet use was affected by amateur radio.

These results have been compiled over a 6 month period. I have also completed a review of an Amperion BPL site in Allentown, PA to use as a site reference. I will also be filing an inference report on that BPL site

This Report will be filed with the FCC, ARRL Yates County and The Village of Penn Yan.

Submitted by
Richard A. Ayers
KB2DMK

Richard A. Ayers
2590 Ayers Road
Penn Yan, NY 14527



Federal Communications Commission
James R. Burtie
Chief, Experimental Licensing Branch
Room 7-A267
445 12th Street SW
Washington, DC 20024

20024+2101



Report of Harmful Interference From a Broadband Over Power Line Trial or Deployment

Name of complainant: Village of Penn Yan Trial _____

Call sign (if applicable): KB2DMK _____

Station location: Mobil _____

Mailing address (if different): 2590 Ayers Road _____

City, State, Zip: Penn Yan, NY 14527 _____

Telephone: 315-536-7570 _____ Email: rayers@linkny.com _____

Description of Interference: DVI/Amperion BPL deployment

see enclosed report _____

Description of station: Icom 735, _____

Receiver(s) affected: Icom 735 _____

Antenna type: Mobil vertical whip _____

Antenna location: center mount on the truck _____

Distance of antenna from own house (feet): n/a _____

Distance of antenna from neighboring houses (feet): n/a _____

Distance of antenna from power distribution line or equipment (feet): 100 _____

Log of interference:

Date	Time	Frequency	Receive Mode	Interfering signal strength	Description
4/15/04	9:00pm	16.493-38.000	Am	S1-S9	Affected ham bands 10, 12, 15 and 17 + 11 meter band Some bands completely unusable due to BPL Noise

Alan Stillwell

From: James Burtle
Sent: Wednesday, March 31, 2004 11:22 AM
To: 'rkelly@ssd.com'
Cc: Ira Keltz; Bruce Franca; Bruce Romano; Alan Scrim; Alan Stillwell; Anh Wride
Subject: FW: Interference Complaint

Mr. Kelly,

This is an interference complaint filed against the Ambient Corporation license. I need to know the name of the appropriate contact person in this system. I will be asking this person to resolve this complaint. He/she will also be asked to respond to me explaining what was done to resolve the complaint and to contact the complainant.

Jim Burtle
Chief, Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission

-----Original Message-----

From: Dave Hallidy [mailto:k2dh@frontiernet.net]
Sent: Monday, March 29, 2004 8:59 PM
To: Anh Wride; Alan Stillwell; Riley Hollingsworth; James Burtle
Subject: Interference Complaint

My name is David Hallidy
My address is: 1027 Rousseau Drive, Webster, NY 14580
My telephone number (day or night) is: (585) 872-0942

With this email, I am registering an official complaint of interference to the operation of my mobile Amateur Radio Station. My FCC-issued callsign is: K2DH, Amateur Extra Class.

On March 27, 2004 I was travelling through the city of Penn Yan, New York and attempting to operate on frequencies in the 15 and 10 meter Amateur bands. I encountered very high levels of noise on both those bands, and upon further investigation, also on the Amateur 17 and 12 meter bands. The levels of interference I observed were, at times, as strong, or stronger than an S9 level as indicated on the Signal Strength Meter in my Yaesu model FT-100D transceiver. At this level, the stations I was attempting to contact were essentially unreadable, even though they were at times as strong as S9 (which corresponds to a level greater than 50dB above the noise floor).

The character of the noise is interesting, in that it isn't confined to a particular frequency or group of frequencies, but instead, occupies the entire spectrum from somewhere below 18MHz to greater than 30MHz. I found this while tuning the receiver trying to pinpoint the source of the interference. The noise seems to consist of a series of closely-spaced tones or carriers, with intermittent bursts of digital modulation on them. After some investigation, I concluded that the noise was emanating from the overhead power lines in one part of the city. My conclusion, after further discussion of this with other Amateurs, is that this interference was caused by the Amperion Broadband over Power Lines (BPL) system installed in part of the city of Penn Yan. I could not use the 17, 15, 12, or 10 meter ham bands until I was at least 3/4 mile away from the strongest point of the interference, which by my measurements is on Liberty Street in Penn Yan.

I would like to discuss this interference with you, so that the problem may be resolved and the interference stopped before it causes shutdown of a vital communications service in Penn Yan, putting life and/or property at possible risk.

I can be reached at the telephone number indicated at the top of this email, by email, or by regular postal mail at the above indicated address.

Alan Stillwell

From: Dave Hallidy [k2dh@frontiernet.net]
Sent: Monday, March 29, 2004 8:59 PM
To: Anh Wride; Alan Stillwell; Riley Hollingsworth; James Burtle
Subject: Interference Complaint

My name is David Hallidy
My address is: 1027 Rousseau Drive, Webster, NY 14580
My telephone number (day or night) is: (585) 872-0942

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I would like to discuss this interference with you, so that the problem may be resolved and the interference stopped before it causes shutdown of a vital communications service in Penn Yan, putting life and/or property at possible risk.

I can be reached at the telephone number indicated at the top of this email, by email, or by regular postal mail at the above indicated address.

Thank you for your immediate attention to this matter.

Sincerely,
David V. Hallidy
FCC-issued callsign: K2DH
email address: k2dh@frontiernet.net

Alan Stillwell

From: James Burtle
Sent: Wednesday, April 21, 2004 3:07 PM
To: Alan Scrimie; Alan Stillwell; Bruce Franca; Bruce Romano; Anh Wride
Subject: FW: BPL Complaint

-----Original Message-----

From: Loren James [mailto:lawdog14@adelphia.net]
Sent: Wednesday, April 21, 2004 1:02 PM
To: James Burtle
Subject: Re: BPL Complaint

Thanks for taking the time to reply ,I appreciate that. There was a meeting last night with a rep from DVI Data Ventures Inc. I await to see any changes as He stated they had been trying to correct the problem for some time.Loren

----- Original Message -----

From: "James Burtle" <James.Burtle@fcc.gov>
To: "Loren James" <lawdog14@adelphia.net>
Sent: Wednesday, April 21, 2004 11:44 AM
Subject: RE: BPL Complaint

Please send your complaints to the system operator first. He/she needs to have an opportunity to fix the problem. At this point we will note your complaint but will take no action pending the results of the system operator's efforts.

-----Original Message-----

From: Loren James [mailto:lawdog14@adelphia.net]
Sent: Wednesday, April 21, 2004 10:11 AM
To: James Burtle
Subject: BPL Complaint

Right now in the Village of Penn Yan, NY BPL is being tested and the village board is planning to make this a 10-year deal. I know that the technology must move on but at what price. I cannot go to this area right now and operate on a licensed Amateur Radio frequency from 18.068 up thru 30.0 MHz. I know that there is a problem all thru this area. As a licensed amateur I have a right by the FCC to operate and not be interfered with while doing so. This BPL system is a problem, and I do not refer to normal noise floor type noise, I am speaking of band obliterating 20 + noise (near full strength) figures. I urge you top step up and help us to improve this system or pressure them to turn it off till they make alterations to it.Or send your own person up to this area to make a few tests. Thank you. Loren James N2LSJ

James Burtie

From: Dave Hallidy [k2dh@frontiernet.net]
Sent: Thursday, May 06, 2004 11:53 PM
To: James Burtie
Subject: RE: Complaint of Interference Lodged 03/28/04

Turned off



Interference
Complaint

Dear Mr. Burtie-

On Sunday, March 28, 2004 I lodged a formal complaint of interference I experienced to my Amatuer Radio station while I was mobile in Penn Yan, NY on March 27. I have to date received no response from the FCC with regard to this complaint. Can you please advise me of the status of my complaint?

I have attached herewith a copy of the email complaint I sent to you and other FCC officials on March 29, 2004 for your reference.

I would appreciate a response so that I know that my complaint has been received and appropriate action is being taken. Subsequent to my visit on March 27, I visited Penn Yan again on April 20, and the interference was still present.

Thank you for your attention to this matter.

Sincerely,
David Hallidy

James Burtie

From: Dave Hallidy [k2dh@frontiernet.net]
Sent: Monday, March 29, 2004 8:59 PM
To: Anh Wride; Alan Stillwell; Riley Hollingsworth; James Burtie
Subject: Interference Complaint

My name is David Hallidy
My address is: 1027 Rousseau Drive, Webster, NY 14580
My telephone number (day or night) is: (585) 872-0942

With this email, I am registering an official complaint of interference to the operation of my mobile Amateur Radio Station. My FCC-issued callsign is: K2DH, Amateur Extra Class.

On March 27, 2004 I was travelling through the city of Penn Yan, New York and attempting to operate on frequencies in the 15 and 10 meter Amateur bands. I encountered very high levels of noise on both those bands, and upon further investigation, also on the Amateur 17 and 12 meter bands. The levels of interference I observed were, at times, as strong, or stronger than an S9 level as indicated on the Signal Strength Meter in my Yaesu model FT-100D transceiver. At this level, the stations I was attempting to contact were essentially unreadable, even though they were at times as strong as S9 (which corresponds to a level greater than 50dB above the noise floor).

The character of the noise is interesting, in that it isn't confined to a particular frequency or group of frequencies, but instead, occupies the entire spectrum from somewhere below 18Mhz to greater than 30MHz. I found this while tuning the receiver trying to pinpoint the source of the interference. The noise seems to consist of a series of closely-spaced tones or carriers, with intermittent bursts of digital modulation on them. After some investigation, I concluded that the noise was emanating from the overhead power lines in one part of the city. My conclusion, after further discussion of this with other Amateurs, is that this interference was caused by the Amerperion Broadband over Power Lines (BPL) system installed in part of the city of Penn Yan. I could not use the 17, 15, 12, or 10 meter ham bands until I was at least 3/4 mile away from the strongest point of the interference, which by my measurements is on Liberty Street in Penn Yan.

I would like to discuss this interference with you, so that the problem may be resolved and the interference stopped before it causes shutdown of a vital communications service in Penn Yan, putting life and/or property at possible risk.

I can be reached at the telephone number indicated at the top of this email, by email, or by regular postal mail at the above indicated address.

Thank you for your immediate attention to this matter.

Sincerely,
David V. Hallidy
FCC-issued callsign: K2DH
email address: k2dh@frontiernet.net

From: James Burtle
Sent: Wednesday, May 05, 2004 10:50 AM
To: 'William Rogers'
Subject: RE: Penn Yan BPL Complaint
Mr. Rogers,

Thank you for your e-mail. Before sending your complaints to the FCC, please send your complaints to the system operator to give him/her an opportunity to fix the problem. We will note your complaint, but plan to take no action at this time.

Sincerely,

Jim Burtle

-----Original Message-----

From: William Rogers [mailto:brogers@rochester.rr.com]
Sent: Tuesday, April 27, 2004 6:54 PM
To: James Burtle
Subject: Penn Yan BPL Complaint

My name is William S. Rogers
My address is: 104 Judson Street, Webster, NY 14580
My telephone number is: (585) 265-1211

With this email, I am registering an official complaint of interference to the operation of my mobile Amateur Radio Station. My FCC-issued callsign is: K2TER, Amateur Advanced Class.

On April 19, 2004 I was parked in a P&C Food Market parking lot, 321 Liberty Street in Penn Yan, New York and attempting to operate on frequencies in the 10 meter Amateur band. I encountered extremely high levels of noise across the CW and SSB portion of the band, upon further investigation, I found strong carriers with signs of modulation covering the entire spectrum with no gaps from below 27MHz to 30.7MHz. The interference was constant. I was using a based loaded vertical antenna on my car and operating my Kenwood TS690 transceiver at the time. The levels of interference I observed when in FM mode were greater than +60dB over S9. This is the limit of indication on my S-meter. The interference subsided as I drove away from this area so I do not think it was an internal problem with my radio.

I think you would agree that this type of interference needs to be identified and eraticated before it causes interruption of a vital communications service, putting life and/or property at risk.

Thank you, in advance, for your timely attention to this matter.

Sincerely,
William S. Rogers
FCC-issued callsign: K2TER
email address: k2ter@rochester.rr.com

LOREN JAMES 04-21-2004

From: James Burtle
Sent: Wednesday, April 21, 2004 11:44 AM
To: 'Loren James'
Subject: RE: BPL Complaint

Please send your complaints to the system operator first. He/she needs to have an opportunity to fix the problem. At this point we will note your complaint but will take no action pending the results of the system operator's efforts.

-----Original Message-----

From: Loren James [mailto:lawdog14@adelphia.net]
Sent: Wednesday, April 21, 2004 10:11 AM
To: James Burtle
Subject: BPL Complaint

Right now in the Village of Penn Yan, NY BPL is being tested and the village board is planning to make this a 10-year deal. I know that the technology must move on but at what price. I cannot go to this area right now and operate on a licensed Amateur Radio frequency from 18.068 up thru 30.0 MHz. I know that there is a problem all thru this area. As a licensed amateur I have a right by the FCC to operate and not be interfered with while doing so. This BPL system is a problem, and I do not refer to normal noise floor type noise, I am speaking of band obliterating 20 + noise (near full strength) figures. I urge you to step up and help us to improve this system or pressure them to turn it off till they make alterations to it. Or send your own person up to this area to make a few tests. Thank you. Loren James N2LSJ

Dave Hallidy

BPL

From: FCCHAM [FCCHAM@fcc.gov]
Sent: Monday, May 10, 2004 10:58 AM
To: Dave Hallidy
Subject: RE: Interference Complaint

Please sign and date your complaint and either fax to me at 717-338-2574, or mail to my attention at FCC Enforcement, 1270 Fairfield Road, Gettysburg, PA 17325. Please include your address and telephone number and provide as much detail as practical. If you want to scan the signed complaint and e mail it to me, that would be fine too. Thank you. Riley Hollingsworth

-----Original Message-----

From: Dave Hallidy [mailto:k2dh@frontiernet.net]
Sent: Tuesday, March 30, 2004 4:41 PM
To: FCCHAM
Cc: Dave Hallidy
Subject: FW: Interference Complaint

I originally emailed this complaint to the FCC Consumer Center at: fccinfo@fcc.gov. A response from there told me I should lodge my complaint to you. The text of the response from the representative there follows:

You are receiving this email in response to your inquiry to the FCC on 3/30/2004 2:53:40 PM.

Reports of violations within the Amateur (Ham) Radio Service may be made by email at: fccham@fcc.gov

Or, in writing, and mailed to:

Federal Communications Commission
Enforcement Bureau
ATTN: Amateur Radio Complaints
1270 Fairfield Road
Gettysburg, PA 17325

This includes that from BPL

Representative Number : TSR41

My original complaint of BPL interference to my Amateur Radio mobile operation is repeated below:

My name is David Hallidy
My address is: 1027 Rousseau Drive, Webster, NY 14580
My telephone number (day or night) is: (585) 872-0942

With this email, I am registering an official complaint of interference to the operation of my mobile Amateur Radio Station. My FCC-issued callsign is: K2DH, Amateur Extra Class.

On March 27, 2004 I was travelling through the city of Penn Yan, New York and attempting to operate on frequencies in the 15 and 10 meter Amateur bands. I encountered very high levels of noise on both those bands, and upon further investigation, also on the Amateur 17 and 12 meter bands. The levels of interference I observed were, at times, as strong, or stronger than an S9 level as indicated on the Signal Strength

eter in my Yaesu model FT-100D transceiver. At this level, the
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though they were at times as strong as S9 (which corresponds to a level
reater than 50dB above the noise floor).

The character of the noise is interesting, in that it isn't confined to
a particular frequency or group of frequencies, but instead, occupies
the entire spectrum from somewhere below 18Mhz to greater than 30Mhz. I
found this while tuning the receiver trying to pinpoint the source of
the interference. The noise seems to consist of a series of
closely-spaced tones or carriers, with intermittent bursts of digital
modulation on them. After some investigation, I concluded that the noise
was emanating from the overhead power lines in one part of the city. My
conclusion, after further discussion of this with other Amateurs, is
that this interference was caused by the Ameripon Broadband over Power
Lines (BPL) system installed in part of the city of Penn Yan. I could
not use the 17, 15, 12, or 10 meter ham bands until I was at least 3/4
mile away from the strongest point of the interference, which by my
measurements is on Liberty Street in Penn Yan.

I would like to discuss this interference with you, so that the problem
may be resolved and the interference stopped before it causes shutdown
of a vital communications service in Penn Yan, putting life and/or
property at possible risk.

I can be reached at the telephone number indicated at the top of this
email, by email, or by regular postal mail at the above indicated
address.

Thank you for your immediate attention to this matter.

Sincerely,
David V. Hallidy
FCC-issued callsign: K2DH
email address: k2dh@frontiernet.net

David V. Hallidy K2DH
10 May, 2004

Signed this date per request of Riley Hollingsworth in an
email received from him this date.

James Burtie

From: Dave Hallidy [k2dh@frontiernet.net]
Sent: Monday, May 24, 2004 3:43 PM
To: James Burtie; Marc J. Burling; Ed W1RFI Hare; Anh Wride; Riley Hollingsworth; Alan Stillwell
Subject: Second Complaint- BPL Interference in Penn Yan, NY

Importance: High



Complaint #2.doc
(48 KB)

To:
James Burtie, FCC
Marc Burling, CEO Data Ventures Inc.

From: David Hallidy K2DH
1027 Rousseau Drive
Webster, NY 14580
585-872-0942
k2dh@frontiernet.net

cc:
Anh Wride, FCC
Riley Hollingsworth, FCC
Alan Stillwell, FCC
Ed Hare, ARRL

Monday, May 24, 2004

Dear Mr. Burtie:

The attached document lodges my second formal complaint of interference to my Amateur operations while in the city of Penn Yan, New York. This complaint is a continuation of the interference I experienced earlier, which resulted in my original complaint, dated March 28, 2004 and which has, as of today, not been resolved. I would appreciate a response to this complaint as soon as possible. Thank you. Sincerely, David V. Hallidy K2DH

Turned off

Date of Complaint: May 24, 2004
Name: David Hallidy
Address: 1027 Rousseau Drive, Webster, NY 14580
Telephone Number: (585) 872-0942
FCC-licensed Amateur Radio operator, Callsign: K2DH
Date of interference: May 22, 2004

With this document, I am lodging my second formal complaint of interference to my Amateur Radio operations, caused by interference generated from a Broadband over Power Line (BPL) system being tested in the city of Penn Yan, New York.

BACKGROUND

On March 28, 2004 I lodged my first complaint of interference caused by this system. When I made that complaint, I was informed that "the response time will never exceed 20 days" (FCC autoresponse dated 3/29/04 at 0845AM), "Reports of violations within the Amateur (Ham) Radio Service may be made by email at: fccham@fcc.gov... This includes that from BPL" (response from representative number TSR41, dated 3/30/04 at 0258PM), "Please sign and date your complaint and either fax to me at 717-338-2574... Thank you. Riley Hollingsworth" (email from R. Hollingsworth dated 5/10/04 at 1058AM). I have appropriately responded to these emails, but to date there has been no attempt to contact me or, as this complaint will show, nor any resolution to the interference problem in Penn Yan caused by the Amperion/DVI BPL trial being conducted there. The text of my first complaint is attached at the end of this document for your reference. At least one other Amateur has experienced the same interference when traveling in the city of Penn Yan- see the formal complaint lodged by William Rogers (K2TER) dated 4/21/04.

I had been informed, in conversations with Mr. Marc Burling (CEO of Data Ventures Inc, the BPL provider) that they had made extensive changes to the system there and had resolved the interference problems.

COMPLAINT

When I arrived in Penn Yan, I proceeded to the BPL injection point (located near the P&C food store on Liberty St) to see if there was anything there. I found the following:

The BPL interference (the classic multiple carriers spaced just over 1kHz apart, accompanied by a "tick-tick-tick"

and/or buzzing) was present beginning at 32.51 MHz at a level of "S-9" and continued without a break to 35.10 MHz, where it then dropped quickly to just above the noise floor of my receiver. The other "leg" of this segment appears to pick up at 36.10 MHz and runs without a break to 39.40 MHz at the "S-9" level. There are low-level "residual" carriers detectable throughout the spectrum from below 32 to above 40 MHz.

Moving away from the injection point, I proceeded North on Liberty St, just about to Court St (the northern end of the test area). I could still easily hear the 32 to 39 MHz signals- they were still above "S-7" on my Yaesu FT-100D. But, I had moved to where I thought the next segment began (I was sitting under the line at what I guessed to be a repeater/extractor) and found the next segment as follows: The same type of interference that I heard at the first location was present beginning at 22.20 MHz at levels above "S-9" (actually closer to S-9+20dB) and continuing without a break to 24.910 MHz. The signal quickly dropped down to just above the noise (but never disappeared completely inside the 12m band) and resumed at full strength at 25.04 MHz up to 25.92 MHz. This is only one half of this segment, so I continued looking for the other portion. I found it at 17.36 MHz, continuing without a break to 21.10 MHz. There was full-strength BPL in the 17m band (18.068-18.168 MHz), and the interference didn't end before the beginning of the 15m band- the lower 100kHz of the band is wiped out by the BPL. Residual carriers could be detected in the 15m band up to around 21.16 MHz. The signals in the 17m band never dropped below "S-9+20dB", and were the same at the low end of 15m.

I traveled North on Liberty St to determine how far away from the end of the test zone I could still detect the interference. In my first report, I stated that I was 1.5 miles north of the Court St end of the zone and it was still detectable. This time, the range was a bit less. I had "S-2" to "S-5" signal levels at 0.8 miles from the end of the trial area. They might have been detectable farther north, but the general level of ambient noise seemed higher than on my first visit, and may have contributed to the apparent reduction in propagation. Moving East from the trial zone, I was still able to detect BPL at "S-2 to S-5" levels at distances greater than 0.5 miles from the lines.

Signals which were present in the entire 17 meter and the lower portion of the 15 meter band on my arrival in Penn Yan were not readable through the noise generated by the BPL system.

I have included, as attachments to this document, excerpts from the appropriate portions of the FCC Rules, parts 5 and 15 for reference.

So, what I concluded from this visit is the following: DVI (the provider) has made an attempt to reduce the interference to the Amateur spectrum in Penn Yan. They have been partially successful.

- 1) The 10m band (28.00-29.70 MHz) is clear of any BPL (it was completely covered with BPL during my first visit).
- 2) An attempt has been made to notch out BPL from the 15m band (21.00-21.45 MHz).
- 3) An attempt has been made to notch out BPL from the 12m band (24.890-24.990 MHz).
- 4) No attempt has been made to remove BPL from the 17m band. The 17m band (18.068-18.168 MHz) is completely covered up with strong BPL (as it was on my first visit).
- 5) The 15m band is only partially cleared of BPL. The lower 100kHz of the 15m band is completely covered up with strong BPL (the entire 15m band was covered up during my first visit), and residual carriers exist up to about 21.16 MHz.
- 6) The 12m band is only partially cleared of BPL. The lower 20kHz of the 12m band is completely covered up with strong BPL (the entire 12m band was covered during my first visit). In addition, the notch in the 12m band is rather ineffective- the residual signals never disappear.

The equipment on which I observed this interference was the following: A Yaesu FT-100D transceiver, which has now had it's "S" meter calibrated and shows "S-9" with 48uV of RF into the antenna port at 24.9 MHz. It varies by a few microvolts around this value across the spectrum from 14 to 50 MHz. Most measurements were made in the AM detection mode, with a 6kHz IF filter in place- the SSB and FM modes were used for comparison. AGC cannot be disabled on this receiver. My Tarheel M200A screwdriver antenna for measurements at or below 30 MHz- the antenna was resonated for each frequency monitored. A PAR 6m Omni-Angle horizontally polarized mobile antenna for measurements made near 50 MHz. A base-loaded vertical whip antenna

(magnetically mounted and resonated at 35MHz) on the roof of the vehicle for measurements made in the 30-40MHz range.

REQUESTED ACTION BY THE FCC

I formally request that the FCC order the BPL system in the city of Penn Yan, NY shut down until the interference generated by this system can be eliminated. My operations there, and the operations of other Amateurs are severely affected by the interference generated by the BPL system in Penn Yan. I am further concerned that no action has evidently been taken with respect to my first complaint of interference in this case. I note that during a web search, I discovered that there are licensed commercial/emergency services users of the spectrum above 30 MHz in Penn Yan whose operations may be in jeopardy due to the level of interference.

I would appreciate a response to this complaint.

Respectfully submitted May 24, 2004,

David V. Hallidy

FCC-authorized Amateur Extra Class licensee: K2DH

Email address: k2dh@frontiernet.net

ATTACHMENT 1- ORIGINAL FCC COMPLAINT, Dated March 28, 2004

My name is David Hallidy

My address is: 1027 Rousseau Drive, Webster, NY 14580

My telephone number (day or night) is: (585) 872-0942

With this email, I am registering an official complaint of interference to the operation of my mobile Amateur Radio Station. My FCC-issued callsign is: K2DH, Amateur Extra Class.

On March 27, 2004 I was travelling through the city of Penn Yan, New York and attempting to operate on frequencies in the 15 and 10 meter Amateur bands. I encountered very high levels of noise on both those bands, and upon further investigation, also on the Amateur 17 and 12 meter bands. The levels of interference I observed were, at times, as strong, or stronger than an S9 level as indicated on the Signal Strength Meter in my Yaesu model FT-100D transceiver. At this level, the stations I was attempting to contact were essentially unreadable, even though they were at times as strong as S9 (which corresponds to a level greater than 50dB above the noise floor).

The character of the noise is interesting, in that it isn't confined to a particular frequency or group of frequencies, but instead, occupies the entire spectrum from somewhere below 18Mhz to greater than 30MHz. I found this while tuning the receiver trying to pinpoint the source of the interference. The noise seems to consist of a series of closely-spaced tones or carriers, with intermittent bursts of digital modulation on them.

After some investigation, I concluded that the noise was emanating from the overhead power lines in one part of the city. My conclusion, after further discussion of this with other Amateurs, is that this interference was caused by the Amperion Broadband over Power Lines(BPL) system installed in part of the city of Penn Yan. I could not use the 17, 15, 12, or 10 meter ham bands until I was at least 3/4 mile away from the strongest point of the interference, which by my measurements is on Liberty Street in Penn Yan.

I would like to discuss this interference with you, so that the problem may be resolved and the interference stopped before it causes shutdown of a vital communications service in Penn Yan, putting life and/or property at possible risk.

I can be reached at the telephone number indicated at the top of this email, by email, or by regular postal mail at the above indicated address.

Thank you for your immediate attention to this matter.

Sincerely,
David V. Hallidy
FCC-issued callsign: K2DH
email address: k2dh@frontiernet.net

ATTACHMENT 2- EXCERPTS FROM 47C.F.R. PARTS 5 and 15
CHAPTER I--FEDERAL COMMUNICATIONS COMMISSION

PART 5--EXPERIMENTAL RADIO SERVICE (OTHER THAN BROADCAST)--Table of Contents

Subpart B--Applications and Licenses

Sec. 5.85 Frequencies and policy governing their assignment.

(a) Stations operating in the Experimental Radio Service may be authorized to use any government or non-government frequency designated in the Table of Frequency Allocations set forth in part 2 of this chapter, provided that the need for the frequency requested is fully justified by the applicant.

(b) Each frequency or band of frequencies available for assignment to stations in the Experimental Radio Service is available on a shared basis only, and will not be assigned for the exclusive use of any one applicant, and such use may also be restricted to one or more specified geographical areas. Not more than one frequency in a band of frequencies

will normally be assigned for the use of a single applicant unless a showing is made demonstrating that need for the assignment of additional frequencies is essential to the proposed program of experimentation.

(c) Frequency assignments will be made only on the condition that harmful interference will not be caused to any station operating in accordance with the Table of Frequency Allocation of part 2 of this chapter.

(d) * * *

(e) The Commission may, at its discretion, condition any experimental license or STA on the requirement that before commencing operation, the new licensee coordinate its proposed facility with other licensees that may receive interference as a result of the new licensee's operations.

(f) * * *

PART 15--RADIO FREQUENCY DEVICES--Table of Contents

Subpart A--General

Sec. 15.5 General conditions of operation.

(a) Persons operating intentional or unintentional radiators shall not be deemed to have any vested or recognizable right to continued use of any given frequency by virtue of prior registration or certification of equipment, or, for power line carrier systems, on the basis of prior notification of use pursuant to Sec. 90.63(g) of this chapter.

(b) Operation of an intentional, unintentional, or incidental radiator is subject to the conditions that no harmful interference is caused and that interference must be accepted that may be caused by the operation of an authorized radio station, by another intentional or unintentional radiator, by industrial, scientific and medical (ISM) equipment, or by an incidental radiator.

(c) The operator of a radio frequency device shall be required to cease operating the device upon notification by a Commission representative that the device is causing harmful interference. Operation shall not resume until the condition causing the harmful interference has been corrected.

(d) * * *

Sec. 15.15 General technical requirements.

(a) An intentional or unintentional radiator shall be constructed in accordance with good engineering design and manufacturing practice. Emanations from the device shall be suppressed as much as practicable, but in no case shall the emanations exceed the levels specified in these rules.

(b) An intentional or unintentional radiator must be constructed such that the adjustments of any control that is readily accessible by

or intended to be accessible to the user will not cause operation of the device in violation of the regulations.

(c) Parties responsible for equipment compliance should note that the limits specified in this part will not prevent harmful interference under all circumstances. Since the operators of part 15 devices are required to cease operation should harmful interference occur to authorized users of the radio frequency spectrum, the parties responsible for equipment compliance are encouraged to employ the minimum field strength necessary for communications, to provide greater attenuation of unwanted emissions than required by these regulations, and to advise the user as to how to resolve harmful interference problems (for example, see Sec. 15.105(b)).

Sec. 15.17 Susceptibility to interference.

(a) Parties responsible for equipment compliance are advised to consider the proximity and the high power of non-Government licensed radio stations, such as broadcast, amateur, land mobile, and non-geostationary mobile satellite feeder link earth stations, and of U.S. Government radio stations, which could include high-powered radar systems, when choosing operating frequencies during the design of their equipment so as to reduce the susceptibility for receiving harmful interference. Information on non-Government use of the spectrum can be obtained by consulting the Table of Frequency Allocations in Sec. 2.106 of this chapter.

(b) Information on U.S. Government operations can be obtained by contacting: Director, Spectrum Plans and Policy, National Telecommunications and Information Administration, Department of Commerce, Room 4096, Washington, DC 20230.

James Burtie

From: Jrpmccoy@aol.com
Sent: Sunday, June 06, 2004 11:42 AM
To: James Burtie
Cc: ebalsley@villageofpennyan.com; jdloe.jdlsm@comcast.net
Subject: Claims of BPL noise in Penn Yan and resolution.
 Mr. Burtie,

I am the president of DVI, the company that has a limited BPL deployment in Penn Yan. Welcome to the very center of the battle between the ARRL and BPL. I have all the documentation regarding our successful resolution of the BPL noise issues in the village. The recent claims submitted to you from Mr. Halliday are tantamount to fraud. I am available to discuss this and provide definitive evidence of the resolution in ARRL's own writing including Mr. Halliday's.

DVI in conjunction of the Village of Penn Yan and Amperion have expended significant resources in the tuning of the BPL network. Local Hams have worked hand in hand to accomplish this.

I will be out of office on Monday but please contact me otherwise.

Sincerely,

Joseph R. McCoy, PE
 President & CTO

www.godvi.com

From: "James Burtie" <James.Burtie@fcc.gov>
 To: <ebalsley@villageofpennyan.com>
 Subject: Question from the FCC
 Date: Wed, 26 May 2004 13:28:41 -0400
 Message-ID: <BF17D4F30776D441B05165F92C68ACD1027BEF6D@p2pxmb01.fccnet.win.fcc.gov>
 MIME-Version: 1.0
 Content-Type: multipart/alternative;
 boundary="====_NextPart_000_0094_01C44BA3.5EF0AC40"
 X-Mailer: Microsoft Outlook, Build 10.0.2627
 X-OriginalArrivalTime: 26 May 2004 17:28:41.0934 (UTC) FILETIME=[E3A6AEE0:01C44346]
 X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2800.1409
 X-MS-Has-Attach:
 X-MS-TNEF-Correlator:

This is a multi-part message in MIME format.

====_NextPart_000_0094_01C44BA3.5EF0AC40
 Content-Type: text/plain;
 charset="Windows-1252"
 Content-Transfer-Encoding: 7bit

Mr. Balsley,

As I mentioned in our telephone conversation earlier today, we have received a few interference complaints related to your Broadband Over Power Lines (BPL) experiment. Soon I will forward to you the e-mail complaints that we have received to date. If you have received complaints other than those forwarded, please forward copies to me.

The FCC is interested in what has been done to resolve the interference complaints. You mentioned to me that you have received mostly verbal

10/21/2004

complaints so far. Please send me a summary of your interference resolution efforts thus far. I would also like to be kept informed of our interference resolution efforts going forward.

We are sending similar requests to all BPL experimenters if we have received interference complaints about their operation.

Sincerely,

Jim Burtie
Chief, Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission